

REMARKS

The Office Action dated March 7, 2006, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-20 are presently pending in the application, of which claims 1 and 10 are independent. Claims 1-20 have been amended to more particularly point out and distinctly claim the invention. No new matter has been added. Claims 1-20 are respectfully submitted for consideration.

Rejections under 35 U.S.C. 102(e)

Claim 1 and 10 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,748,220 of Chow et al. ("Chow"). Applicant respectfully traverses this rejection.

Claim 1, upon which claims 2-9 depend, is directed to a method of allocating uplink resources including estimating traffic in an uplink, and allocating resources based on said estimating, wherein the estimating is performed following the transmission of a signal in a downlink.

Claim 10, upon which claims 11-20 depend, is directed to a communication system including estimating means for estimating traffic in an uplink, and uplink allocation resource means for allocating uplink resources based on said estimating means,

wherein the estimating means is configured to estimate traffic in the uplink following the transmission of a signal in a downlink.

Applicant respectfully submits that Chow fails to disclose or suggest all of the elements of any of the presently pending claims.

Chow is generally directed to resource allocation in wireless networks. As explained at column 2, lines 34-60, thereof, Chow aims to provide a resource allocation scheme that optimizes the overall data throughput of a base station, and therefore allows additional wireless users to be serviced or existing users to be serviced more efficiently with existing infrastructure.

Claim 1 recites “wherein the estimating is performed following the transmission of a signal in a downlink,” and claim 10 recites “wherein the estimating means is configured to estimate traffic in the uplink following the transmission of a signal in a downlink.” Applicant respectfully submits that Chow fails to disclose or suggest at least these features of the claims.

The Office Action took the position that Chow discloses “wherein the estimating is performed following the transmission of a signal in the downlink” at column 16, line 7-21. Applicant respectfully disagrees. Chow states that “For uplink TBFs... the BS 104 will track and store the quality metric (e.g. BER) for each MSi. Accordingly, to obtain the desired quality metric, the resource allocator 400 may transmit a request through BS I/F 404 for this information to BS 104 and, responsive to this request, receive the desired information for each MSi” (column 16, line 9-15 of Chow).

Thus, to obtain the “quality metric” (which the Office Action has construed as being analogous to the traffic estimate of the present invention, which construction is not admitted by Applicant) a request is sent from the resource allocator to the BS. This is not “the transmission of a signal in the downlink,” as a downlink signal can never terminate at a base station. The only situation in Chow in which signals are sent from the base station to the mobile station is the case of downlink TBFs are signals sent from the base station to the MS in Chow (see column 16, line 15-21).

Applicant, therefore, respectfully submits that the claimed feature “wherein the estimating is performed following the transmission of a signal in a downlink” is neither disclosed nor suggested by Chow.

In addition, Applicant notes that the Office Action took the position that the “quality metric” of Chow corresponds to the term “traffic” of claim 1. Applicants respectfully disagree with this comparison. Chow states at column 9, line 23-27, that “the quality metric, which may be, for example, a bit error rate or the like, is used by the resource allocator 400 to determine or assess the actual (as compared to maximum or ideal) data throughput of the BS.” One of ordinary skill in the art would understand that bit error rate (BER) or data throughput is not an estimate of the traffic on a communications link. Rather these are only a measure of the quality of the link, and how much data they are capable of transmitting.

Chow does not make any mention of “estimating traffic in an uplink.” Applicants, therefore, respectfully submit that the additional feature of claim 1, namely “estimating

traffic in an uplink” as well as the feature of claim 10 “estimating means for estimating traffic in an uplink” are also not disclosed or suggested by Chow.

It is, therefore, respectfully requested that this rejection of claims 1 and 10 be withdrawn.

Claims 1 and 10 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,785,252 of Zimmerman et al. (“Zimmerman”). Applicant respectfully traverses this rejection.

The claims are discussed above. Applicant respectfully submits that the cited reference, Zimmerman, neither discloses nor suggests all of the elements of any of the presently pending claims.

Zimmerman is directed to a method and apparatus for a self-correcting bandwidth request/grant protocol in a wireless communication system. In Zimmerman allocation of resources is partly based on a Round Robin algorithm, as described at column 24, line 24. In the Round Robin scheme, some connections may not receive bandwidth, and thus, implicitly, do not communicate, as described at column 24, lines 22-24. Additionally, Zimmerman states that an uplink traffic estimation is performed “to allocate uplink bandwidth to the CPEs, at column 24, lines 26-29. Zimmerman further indicates the allocation of uplink bandwidth should precede allocation of downlink bandwidth at column 24, lines 41-44. Thus, Zimmerman describes that data traffic is estimated based on the bandwidth requests received from the CPEs and based on an observation of actual data traffic, as described at column 24, lines 64-67. Accordingly, Zimmerman allocates

uplink capacity prior to beginning downlink, because Zimmerman does not link unless sufficient bandwidth is available, and Zimmerman performs uplink bandwidth allocation prior to downlink bandwidth allocation.

Claims 1 recites “wherein the estimating is performed following the transmission of a signal in a downlink.” Claim 10 recites “wherein the estimating means is configured to estimate traffic in the uplink following the transmission of a signal in a downlink.” These limitations are not disclosed or suggested by Zimmerman. Instead, as explained above, Zimmerman directs that the allocation of uplink bandwidth is performed before the allocation of downlink bandwidth, and that allocation of resources precedes transmission, as explained at column 24, lines 15-67 of Zimmerman.

The Office Action took the position that “wherein the estimating is performed following the transmission of a signal in the downlink” is disclosed by the polling signals in Zimmerman. Applicant respectfully disagrees. It is definitively stated in column 22, line 36-44, of Zimmerman that “Rather than check the queue status directly, the base station preferably receives requests for bandwidth from the CPEs using the techniques described above with reference Figs 3-11. Using these bandwidth requests, the base station reconstructs a logical picture of the state of the CPE data queues. Based on this logical view of the set of queues, the base station allocates uplink bandwidth.” Thus, the allocation of uplink bandwidth is performed following a signal (the request) from the CPE to the base station in Zimmerman, *i.e.* following an uplink signal. This is clearly distinguishable from the recitation of claim 1 that the estimation is performed following

the transmission of a signal in the downlink. The words of claims must be construed as broadly as reasonable, but construing the claimed “downlink” to cover uplink signals is not reasonable.

Accordingly, it is respectfully submitted that Zimmerman fails to disclose or suggest at least the limitations referred to above. Accordingly, it is respectfully requested that the rejection be withdrawn.

Rejections under 35 U.S.C. 103(a)

Claims 2 and 11 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of U.S. Patent Application Publication No. 2005/0013287 of Wallentin et al. (“Wallentin”). Applicant respectfully traverses this rejection.

Zimmerman is discussed above. Wallentin is directed to a method and arrangement for channel type switching. Wallentin aims to improve efficient use of radio network resources. In Wallentin, in some cases uplink requests can be delayed or suppressed if congestion is an issue.

Claims 2 and 11 depend from claims 1 and 10 respectively, and thus are patentable for at least the reasons that claims 1 and 10 are patentable. The cited reference, Wallentin, does not remedy the deficiencies of Zimmerman described above. One of ordinary skill in the art would not modify Zimmerman to change the order of Zimmerman’s operations, because doing so would fundamentally alter Zimmerman’s system.

The Office Action's combination of references is impermissible hindsight reconstruction, as described in MPEP 2145. To establish a *prima facie* case of obvious under 35 U.S.C. 103, it is essential that the Office Action provide some motivation or suggestion to make the claimed invention in light of the prior art teachings. *See, e.g., In re Brouwer*, 77 F.3d 422, 425, 37 USPQ2d 1663, 1666 (Fed. Cir. 1996) and MPEP 2144.08. The Office Action does not provide proper motivation to combine the references, and accordingly fails to provide a *prima facie* case for obviousness. As MPEP Section 2143.01 indicates, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Accordingly, it is respectfully requested that this rejection be withdrawn.

MPEP 707.07(f) sets forth the Examiner's obligation to answer all material traversed. Specifically MPEP 707.07(f) states that "the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it." It is essential that the Office Action address each of the arguments presented by Applicant, so that meaningful appellate review is possible. The Office Action, however, does not address Applicant's arguments above, and these arguments were previously presented. Accordingly, if the rejection is again maintained, a response to the arguments is respectfully requested in a new Non-Final Office Action.

Claims 3 and 12 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of Wallentin and further in view of U.S. Patent Publication No. 2004/01219917 of Love et al. ("Love"). Applicant respectfully traverses this rejection.

Zimmerman and Wallentin are discussed above. Love is directed to HARQ ACK/NAK coding for a communication device during soft handover. Love aims to improve HARQ ACK/NAK in such a way to obtain macro selection diversity benefit.

Claims 3 and 12 depend from claims 1 and 10 respectively, and thus are patentable for at least the reasons that claims 1 and 10 are patentable. The cited reference, Love, does not remedy the deficiencies of Zimmerman and Wallentin described above. One of ordinary skill in the art would not modify Zimmerman to change the order of Zimmerman's operations, because doing so would fundamentally alter Zimmerman's system.

The Office Action's combination of references is impermissible hindsight reconstruction, as described in MPEP 2145. To establish a *prima facie* case of obvious under 35 U.S.C. 103, it is essential that the Office Action provide some motivation or suggestion to make the claimed invention in light of the prior art teachings. *See, e.g., In re Brouwer*, 77 F.3d 422, 425, 37 USPQ2d 1663, 1666 (Fed. Cir. 1996) and MPEP 2144.08. The Office Action does not provide proper motivation to combine the references, and accordingly fails to provide a *prima facie* case for obviousness. As MPEP Section 2143.01 indicates, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also

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Claims 4 and 13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of Wallentin and further in view of U.S. Patent Application Publication No. 2005/0048985 of Haartsen ("Haartsen"). Applicant respectfully traverses this rejection.

Zimmerman and Wallentin are discussed above. Haartsen is directed to resource management and traffic control in time-division-duplex communication systems. Haartsen aims to solve the problems associated with previous TDD communication systems, and to provide support for asymmetric service in a TDD system having multi-radio units, smart resource allocation, and smart control of asymmetric traffic.

Claims 4 and 13 depend from claims 1 and 10 respectively, and thus are patentable for at least the reasons that claims 1 and 10 are patentable. The cited reference, Haartsen, does not remedy the deficiencies of Zimmerman and Wallentin described above. One of ordinary skill in the art would not modify Zimmerman to change the order of Zimmerman's operations, because doing so would fundamentally alter Zimmerman's system.

The Office Action's combination of references is impermissible hindsight reconstruction, as described in MPEP 2145. To establish a *prima facie* case of obvious under 35 U.S.C. 103, it is essential that the Office Action provide some motivation or suggestion to make the claimed invention in light of the prior art teachings. *See, e.g., In re Brouwer*, 77 F.3d 422, 425, 37 USPQ2d 1663, 1666 (Fed. Cir. 1996) and MPEP 2144.08. The Office Action does not provide proper motivation to combine the references, and accordingly fails to provide a *prima facie* case for obviousness. As MPEP Section 2143.01 indicates, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Accordingly, it is respectfully requested that this rejection be withdrawn.

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it.” It is essential that the Office Action address each of the arguments presented by Applicant, so that meaningful appellate review is possible. The Office Action, however, does not address Applicant’s arguments above, and these arguments were previously presented. Accordingly, if the rejection is again maintained, a response to the arguments is respectfully requested in a new Non-Final Office Action.

Claims 5 and 14 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of Love and further in view of U.S. Patent No. 6,697,378 of Patel (“Patel”). Applicant respectfully traverses this rejection.

Zimmerman and Love are discussed above. Patel is directed to a method and apparatus for class-based transmission control of data connections based on real-time external feedback estimates obtained using messaging from a wireless network. Patel aims, among other things, to improve the overall throughput of a wireless voice/data network and to delay, prioritize, and exploit the latency requirements of various classes of traffic by artificially controlling the burstiness of data packet transmissions to maximize the use of available capacity in a particular cell (sector) in the wireless network.

Claims 5 and 14 depend from claims 1 and 10 respectively, and thus are patentable for at least the reasons that claims 1 and 10 are patentable. The cited reference, Patel, does not remedy the deficiencies of Zimmerman and Love described above. One of ordinary skill in the art would not modify Zimmerman to change the order of

Zimmerman's operations, because doing so would fundamentally alter Zimmerman's system.

The Office Action's combination of references is impermissible hindsight reconstruction, as described in MPEP 2145. To establish a *prima facie* case of obvious under 35 U.S.C. 103, it is essential that the Office Action provide some motivation or suggestion to make the claimed invention in light of the prior art teachings. *See, e.g., In re Brouwer*, 77 F.3d 422, 425, 37 USPQ2d 1663, 1666 (Fed. Cir. 1996) and MPEP 2144.08. The Office Action does not provide proper motivation to combine the references, and accordingly fails to provide a *prima facie* case for obviousness. As MPEP Section 2143.01 indicates, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Accordingly, it is respectfully requested that this rejection be withdrawn.

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presented. Accordingly, if the rejection is again maintained, a response to the arguments is respectfully requested in a new Non-Final Office Action.

Claims 6-7 and 15-16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of Haartsen. Applicant respectfully traverses this rejection. Zimmerman and Haartsen are discussed above.

Claims 6-7 and 15-16 depend from claims 1 and 10 respectively, and thus are patentable for at least the reasons that claims 1 and 10 are patentable. As described above, the cited reference Haartsen does not remedy the deficiencies of Zimmerman. One of ordinary skill in the art would not modify Zimmerman to change the order of Zimmerman's operations, because doing so would fundamentally alter Zimmerman's system.

The Office Action's combination of references is impermissible hindsight reconstruction, as described in MPEP 2145. To establish a *prima facie* case of obvious under 35 U.S.C. 103, it is essential that the Office Action provide some motivation or suggestion to make the claimed invention in light of the prior art teachings. *See, e.g., In re Brouwer*, 77 F.3d 422, 425, 37 USPQ2d 1663, 1666 (Fed. Cir. 1996) and MPEP 2144.08. The Office Action does not provide proper motivation to combine the references, and accordingly fails to provide a *prima facie* case for obviousness. As MPEP Section 2143.01 indicates, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430

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Claims 8-9 and 17-18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of Haartsen and further in view of Patel. Applicant respectfully traverses this rejection. Zimmerman, Haartsen, and Patel are discussed above.

Claims 8-9 and 17-18 depend from claims 1 and 10 respectively, and thus are patentable for at least the reasons that claims 1 and 10 are patentable. As described above, the cited references Haartsen and Patel do not remedy the deficiencies of Zimmerman described above. One of ordinary skill in the art would not modify Zimmerman to change the order of Zimmerman’s operations, because doing so would fundamentally alter Zimmerman’s system.

The Office Action’s combination of references is impermissible hindsight reconstruction, as described in MPEP 2145. To establish a *prima facie* case of obvious

under 35 U.S.C. 103, it is essential that the Office Action provide some motivation or suggestion to make the claimed invention in light of the prior art teachings. *See, e.g., In re Brouwer*, 77 F.3d 422, 425, 37 USPQ2d 1663, 1666 (Fed. Cir. 1996) and MPEP 2144.08. The Office Action does not provide proper motivation to combine the references, and accordingly fails to provide a *prima facie* case for obviousness. As MPEP Section 2143.01 indicates, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Accordingly, it is respectfully requested that this rejection be withdrawn.

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Claim 19 was rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of U.S. Patent No. 6,868,273 of Cave ("Cave"). Applicant respectfully traverses this rejection.

Zimmerman is discussed above. Cave is directed to signalling connection admission control in a wireless network. Cave aims to provide a method to determine whether a user equipment should be admitted for control plane signalling, and, if so, whether the user equipment should be admitted for signalling over common resources or dedicated resources.

Claim 19 depends from claim 10, and thus is patentable for at least the reasons that claim 10 is patentable. The cited reference, Cave, does not remedy the deficiencies of Zimmerman described above. One of ordinary skill in the art would not modify Zimmerman to change the order of Zimmerman's operations, because doing so would fundamentally alter Zimmerman's system.

The Office Action's combination of references is impermissible hindsight reconstruction, as described in MPEP 2145. To establish a *prima facie* case of obvious under 35 U.S.C. 103, it is essential that the Office Action provide some motivation or suggestion to make the claimed invention in light of the prior art teachings. *See, e.g., In re Brouwer*, 77 F.3d 422, 425, 37 USPQ2d 1663, 1666 (Fed. Cir. 1996) and MPEP 2144.08. The Office Action does not provide proper motivation to combine the references, and accordingly fails to provide a *prima facie* case for obviousness. As MPEP Section 2143.01 indicates, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430

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Claim 20 was rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of Wallentin. Applicant respectfully traverses this rejection. Zimmerman and Wallentin are discussed above.

Claim 20 depends from claim 10, and thus is patentable for at least the reasons that claim 10 is patentable. As described above, the cited reference, Wallentin, does not remedy the deficiencies of Zimmerman. One of ordinary skill in the art would not modify Zimmerman to change the order of Zimmerman’s operations, because doing so would fundamentally alter Zimmerman’s system.

The Office Action’s combination of references is impermissible hindsight reconstruction, as described in MPEP 2145. To establish a *prima facie* case of obvious under 35 U.S.C. 103, it is essential that the Office Action provide some motivation or

suggestion to make the claimed invention in light of the prior art teachings. *See, e.g., In re Brouwer*, 77 F.3d 422, 425, 37 USPQ2d 1663, 1666 (Fed. Cir. 1996) and MPEP 2144.08. The Office Action does not provide proper motivation to combine the references, and accordingly fails to provide a *prima facie* case for obviousness. As MPEP Section 2143.01 indicates, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Accordingly, it is respectfully requested that this rejection be withdrawn.

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Conclusion

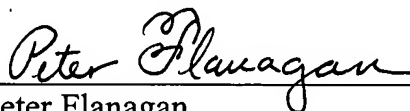
For the reasons described above, it is respectfully submitted that each of claims 1-20 recites a combination of features that is neither disclosed nor suggested in the prior art

of record. Accordingly, it is respectfully requested that each of claims 1-20 be allowed and that this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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PCF:kzw

Enclosures: Petition for Extension of Time
Request for Continued Examination
Check No. 15007